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The compiled data from these sources, summarized in Table 3, show a clear and consistent picture:

- Airborne asbestos levels in buildings, regardless of who manufactured the alleged ACM are consistently low, far below regulatory levels.
- Maintenance personnel who occasionally come into contact with or disturb ACM are exposed to airborne asbestos concentrations well below the regulatory levels.

Table 3. Summary of Indoor Air Concentrations for Various Buildings Nationwide

Building	Sample Type	Operation	# Samples	Concentration, f/cc
CT Mutual	Area	Pre-Abatement	26	0.0032
		Abatement-OWA	132	0.0025
Irvine	Area	Gen Monitoring	429	0.003
		O&M	133	0.013
	Personal	O&M	222	0.016 (TWA)
5 Penn Center	Area	Background	44	0.0029
		Pre-Abatement	229	0.0070
Chatham Center	Area	Gen Monitoring	54	0.0054
	Personal	Pre-Abatement	33	0.0028
		O&M	8	0.0260
Northland Towers	Area	Gen Monitoring	240	0.0018
Prudential Plaza	Area	Gen Monitoring	5	0.0035
		Pre-Abatement	29	0.0062
Twin Towers	Area	Gen Monitoring	150	0.0040
	Personal	Pre-Abatement	367	0.0140
		O&M	5	0.0330
11 Milan	Area	Gen Monitoring	92	0.0026
	Personal	O&M	21	0.0080
Brook Hollow	Area	Gen Monitoring	11	0.0025
Century Center	Area	Gen Monitoring	60	0.0022
Embarcadero Center	Area	Gen Monitoring	670	0.0039
	Personal	O&M	22	0.1720
First Florida	Area	Gen Monitoring	85	0.0025
NW Financial	Area	Gen Monitoring	27	0.0050
Prudential Plaza Denver	Area	Gen Monitoring	27	0.0010
Southdale Offices	Area	Gen Monitoring	29	0.0186
Chicago Bldgs	Area	Outdoor	1218	0.0080
		Gen Monitoring	908	0.0141
		Pre-Abatement	2521	0.0103
	Personal	Pre-Abatement	1097	0.0176

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6.10 Plaintiff Expert Simulation Data Developed for Asbestos in Buildings Litigation

Various simulations have been performed by plaintiffs' experts in support of asbestos in buildings litigation claims. Each of these simulations attempted to demonstrate that working in the vicinity of ACM or surface dusts that have an asbestos component will result in elevated asbestos fibers levels.

Unfortunately, the usefulness of each study is limited because of the improper analytical procedures that were used preventing any direct evaluation of the data in terms of health risk. Limited data are presented in these studies that suggest that, contrary to the reported findings, the observed airborne fiber concentrations were not significantly higher than the current OSHA regulatory levels of 0.1 f/cc (over an 8-hour period) and were generally below this level. These reports did not compute an 8-hour TWA.

6.10.1 Cable Pulling

Two simulations of pulling cable were performed at the Aspen Middle School⁵⁷ that demonstrated that personal exposures were at or below the OSHA PEL of 0.1 f/cc. For each simulation, ceiling tiles were removed and a weighted string was thrown from point to point. The string was then used to pull the cable from the starting location to the ceiling drop-down point. The majority of the air sample analyses were performed using an indirect preparation TEM procedure that renders the data useless in terms of comparing the results to regulatory levels or for calculating relative risks associated with the activity.

A few personal samples were collected and analyzed using PCM. The average results (0.13 f/cc and 0.34 f/cc for tests one and two, respectively) were reported for the tests. These values represent the average fiber concentrations over a 2.5 hour test period. The authors did not compute the TWA for these samples. When appropriately converted to an 8-hour TWA, these results (0.04 f/cc and 0.11 f/cc, respectfully) are not significantly different from the current OSHA regulatory level. Cable pulling is not performed by a worker every day for his/her working lifetime, therefore the lifetime exposure associated with this activity will be reduced by the fraction of time the worker actually spends performing this activity.

6.10.2 Playing in a Gym and Cleaning Bookshelves

Simulations of playing in a gym or during cleaning of bookshelves (and other surfaces) indicate the airborne fiber concentrations resulting from disturbance of surface dusts are far below OSHA regulatory levels⁵⁸. At a YMCA in Greenville, SC, tests were conducted to simulate the play activities in a gym that had been unused for at least one year. These play activities lasted approximately two hours. In another room (the Jolly Room) that had

⁵⁷ D. L. Keyes, J. Chesson, W. M. Ewing, J. C. Faas, R. L. Hatfield, S. M. Hays, W. E. Longo, and J. R. Millette (1991). "Exposure to Airborne Asbestos Associated with Simulated Cable Installation Above A Suspended Ceiling", *American Industrial Hygiene Association Journal*, 52, p. 479-484.

⁵⁸ D. L. Keyes, J. Chesson, S. M. Hays, R. L. Hatfield, W. M. Ewing, W. E. Longo, and J. R. Millette (1992). "Re-entrainment of Asbestos From Dust in a Building With Acoustical Plaster", *Environmental Choices Technical Supplement*, 1, p. 6-11

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been closed for several months, the surfaces were dry-dusted or dry-swept for about an hour. Samples of airborne particles were analyzed using an indirect preparation TEM method and were reported as average values for each test room.

The authors did not convert the measured concentration to TWA values. However there is sufficient information so that the data can be compared to the current OSHA limits. Keyes' conversion factor shows the 8-hour TWA for the personal samples from the gym simulation to be < 0.01 f/cc while the cleaning in the Jolly room resulted in a 0.02 f/cc TWA.

6.10.3 Maintenance Worker Activities

Eight simulations were conducted to document the possible airborne fiber exposure associated with work performed under an O&M program⁵⁹. This work (encompassing moving a wall, cleaning, floor tile replacement, three light fixture maintenance, repair of plaster, and carpet removal) was conducted in unoccupied portions of a number of different buildings with either spray-on fireproofing or acoustical plaster. The results for the actual test and for a separate clean-up period are reported for each simulation.

Keyes et al do not report on the length of time spent performing each operation, though the discussion suggests each test took fewer than 8-hours. The data contained in the report cannot be used to calculate the actual TWA for the activity, nor do the authors provide a frequency and duration scenario for these activities.

7.0 Air Sample Data Provided by the Claimants Are Consistent with Published Data

Those filing claims in Grace's Bankruptcy were required to complete claim forms wherein question number 26 asked "Have you or anyone on your behalf ever conducted any testing or sampling for the presence of asbestos or other particulates in the property?" If the answer was yes, the claimant was asked to attach all documents related to any testing of the property.

RJLG was provided with 753 claims that attached "testing of property" documents for review and compilation. Of the 753 claims reviewed only 52 claims included any air test data. The data demonstrate that in those few instances where air monitoring took place in buildings at issue the levels were no different than outdoor air; the average concentration was < 0.01 f/cc. A summary of the air test data provided with the claims is shown in Table 4 below.

The air data are consistent with other building air data - airborne fiber levels are consistently low, well below OSHA regulatory limits.

⁵⁹ D. L. Keyes, W. M. Ewing, S. M. Hays, W. E. Longo, and J. R. Millette (1994). "Baseline Studies of Asbestos Exposure During Operations and Maintenance Activities", *Applied Occupational Hygiene*, 9, p. 853-860.

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Table 4. Summary of Claimant Air Sample Data

Analysis Type	Method	Air Sample Type	Personal /Area	Count of Samples	Concentration (f/cc)
PCM	NIOSH 7400	background	area	2613	0.003
			Personal (TWA)	4	ND*
		O&M	area	114	0.004
		other	area	2	ND
		pre-abatement	area	52	0.007
			Personal (TWA)	3	0.012
	WCB 0200	background	area	30	0.012
	WCB 0201	pre-abatement	area	11	0.0002
	-na-	background	area	13	0.001
PCM Total				2842	0.0034
TEM	AHERA	background	area	170	0.000
	EPA Level II	background	area	16	0.003
	NIOSH 7402	background	area	18	0.002
	-na-	other	area	3	0.009
TEM Total				207	0.001

* ND – Non-detect

- 8.0 The disturbance of ACM materials, dust or debris in the normal course of building operations produces only localized airborne asbestos levels that are even then generally well below the OSHA permissible exposure limit.

Asbestos fibers are firmly embedded in Grace building products and are not shed into the general building atmosphere due to disturbance of the ACM, dust or debris or due to vibration of the building. Building vibration occurs from a variety of factors ranging from walking to earthquakes. General building vibration occurs constantly; these effects have not been shown to increase airborne asbestos concentrations above ambient levels. More severe vibration, whether due to construction or earthquakes, have not resulted in elevated airborne asbestos concentrations. In addition to the body of data discussed previously, several studies demonstrate that disruptions of ACM materials, dust and debris result in only localized exposures that are generally well below the exposure limits permitted by OSHA.

- 8.1 Airborne Asbestos Concentrations in Buildings Following the Loma Prieta Earthquake

The Loma Prieta earthquake struck central, coastal California including San Francisco and the Bay Area on October 17, 1989. The earthquake measured 7.1 on the Richter scale and lasted for less than 10 seconds. The earthquake killed 62 people, injured 3737, destroyed 367 businesses, and left more than 12,000 homeless. Although devastating, this disaster provided the opportunity to evaluate the effect of a brief and violent event on the release

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of asbestos fibers from buildings with ACM. A study⁶⁰ reported on asbestos concentrations of 419 air samples collected within the first five days following the earthquake from 55 buildings, including 25 schools, 3 universities, 20 commercial, 5 public, and 2 residential buildings.

The samples were collected throughout San Francisco, as well as locations ranging from Sacramento to Monterey, following NIOSH 7402 or AHERA requirements. The data from each building were averaged and grouped into three categories: (1) indoor buildings, (2) buildings with asbestos abatement in progress at the time of the earthquake, and (3) buildings where sampling was performed to monitor clean-up of earthquake debris. Outdoor air samples were also collected at each location. The air samples were analyzed by RJLG using TEM in accordance with the Yamate method.

The results indicated a significant difference in total structure concentration between the outdoor and indoor groups for all of the buildings in the study, 0.001 s/ml and 0.004 s/ml, respectively. However, there were no differences between the indoor and outdoor groups when considering fibers $\geq 5 \mu\text{m}$ or optically equivalent fibers; in the latter case both groups averaged about 0.0001 f/ml. The samples collected from debris clean-up and abatement sites did have significantly higher concentrations of fibers $\geq 5 \mu\text{m}$ as compared to the outdoor samples, 0.00240, 0.1122 and 0.00015 f/ml respectively.

The results of the study indicate that the average ambient asbestos concentrations in buildings following the Loma Prieta earthquake were generally below the AHERA clearance levels and far below the OSHA PEL of 0.1 f/cc.

8.2 Airborne Asbestos Concentrations During Crumbling / Pulverization of Fireproofing Material

Grace fireproofing materials are cementitious materials that, when fractured, break into composite particles, not free asbestos fibers. To document this, RJLG performed a crumbling/pulverization experiment on fireproofing material²³ and collected air samples from various locations relative to the debris stream of the crumbling. The air was monitored during pulverization (5-10 minutes), after pulverization (20 minutes) and throughout the overall experiment. The test was performed six times and the airborne asbestos concentrations were measured using PCM.

The results of the tests are divided into the upper breathing zone, lower breathing zone and area samples. Over the entire duration of the test, the upper breathing zone, lower breathing zone, and area samples had total concentrations of 0.0019, 0.0012, and 0.0013 f/cc respectively. During the pulverization only, the upper and lower breathing zones had concentrations of 0.0000 and 0.0002 f/cc, respectively. After the pulverization, the upper and lower breathing zones had concentrations of 0.0012 and 0.0019 f/cc, respectively.

⁶⁰ D. R. Van Orden, R.J. Lee, K.M. Bishop, D.Kahane and R. Morse (1995). "Evaluation of Ambient Asbestos Concentrations in Buildings Following the Loma Prieta Earthquake," *Regulatory Toxicology and Pharmacology*, 21, p. 117-122.

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8.3 Report on On-Site Investigation of Asbestos Redispersal in Air

Corn investigated⁶¹ the redispersal or reentrainment to air of asbestos structures contained in bulk fireproofing or in settled dust in buildings. The purpose of this study was to investigate building maintenance task activities under carefully controlled conditions in a vacant building and to measure the airborne concentrations of asbestos-in-air created by applying mechanical force and air velocities to sprayed-on fireproofing or settled dust containing asbestos. This subject was of significance to the concern for, and prediction of inhalation risk, if any, to building occupants and maintenance personnel. The fireproofing utilized in this study was Grace's Monokote-3 which contained 8-12% chrysotile. Asbestos was also present in the dust on the upper surfaces of ceiling tiles and in the carpet. Specific task activities investigated were vacuuming carpet containing asbestos, walking on ground bulk fireproofing spread on floor tiles, direct hammering of sprayed-on fireproofing in the ceiling plenum, and hammering the underside of 2 ft. x 2 ft. laid-in and 1 ft. x 1 ft. splined ceiling tiles to disperse upside asbestos-containing settled dust.

The most significant result of this study was the consistent low concentrations of asbestos-in-air measured downstream of the various task activities. All airborne asbestos-in-air concentrations resulting from the task activities and measured by air sampling were below the OSHA PEL of 0.1 f/cc $>5 \mu\text{m}$ length. In the experiment with the most intensive application of force, i.e., direct hammering of sprayed-on fireproofing in the above ceiling air plenum, average downstream airborne asbestos-in-air concentrations during the two-hour task activity per iteration averaged from 0.012 to 0.033 s/cc $\geq 5 \mu\text{m}$ length; average total asbestos structures varied from 0.059 to 0.16 s/cc. The concentrations of asbestos-in-air produced by this task activity were the highest measured for any of the task activities. Corn commented that these results were predictable since adhesive and cohesive forces causing asbestos structures to adhere to surfaces and other particles typically require very high applied air velocities or mechanical forces to become airborne. Air velocities and mechanical forces of the magnitude required to redisperse asbestos in air at concentrations presenting a significant inhalation risk are rarely, if ever, encountered in buildings where sprayed-on asbestos-containing fireproofing has been utilized.

9.0 Surface concentration of asbestos structures, measured using indirect preparation methods, is not an indicator of past release of respirable fibers or a predictor of the potential for future releases.

It is undisputed that asbestos health effects are related to the inhalation of airborne asbestos fibers^{62,63} not to the presence of asbestos in surface dusts.

⁶¹ M. Morton Corn (1997). "Report on On-Site Investigation of Asbestos Redispersal in Air", November 14, 1997.

⁶² U.S. Environmental Protection Agency, Integrated Risk Information System (IRIS), Asbestos (CASRN 1332-21-4), www.epa.gov/iris/subst/0371.htm, 02/20/2001.

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The published literature shows that surface dust sampling and analysis for asbestos content is not scientifically reliable⁶⁴. While dust samples may provide information on the presence or absence of asbestos in the sample, they do not provide information about the concentration of asbestos fibers in the air which is needed to assess exposure.

Building surface dusts contain materials that have been transported long distances prior to deposition. Where materials are locally damaged, the debris will fall and impact the surface because the particles are typically too large to be transported by the moving air. It is well documented that asbestos is present in the dust in buildings that do not contain ACM product material. The GSA building study³⁴ demonstrated that there was no appreciable difference between outdoor and indoor levels whether or not the building contained ACM and whether or not the ACM was in good condition. The highest airborne asbestos fiber concentration in that study was observed in a building with no ACM surfacing material. RJLG analyzed dust samples from three buildings in Baltimore⁶⁵, all of which were built following the EPA ban on asbestos products in 1989. All three of the buildings were found to contain chrysotile and amphibole asbestos fibers in the building dust.

Recent reports have demonstrated there is no correlation between airborne asbestos concentrations and asbestos in the surface dusts. As shown in Figure 1, testing performed by the EPA in Libby⁶⁶ shows two classes of data: 1) asbestos was observed in the dust, but not in the air (data on the horizontal scale) ; and 2) asbestos was observed in the air, but not in the dust (data along the vertical scale).

⁶³ D. W. Berman and K. S. Crump (2003). "Final Draft: Technical support document for a protocol to assess asbestos-related risk," U.S. Environmental Protection Agency, Revision of original from September 4, 2001, Peer-reviewed consultation held in San Francisco on February 25-16, 2003.

⁶⁴ E. Chatfield (2000). "Correlated Measurements of Airborne Asbestos-Containing Particles and Surface Dust", Advances in Environmental Measurement Methods for Asbestos, ASTM STP 1342, M. Beard and H. Rook, Eds., American Society for Testing and Materials, p. 378-402.

⁶⁵ RJ Lee Group, Inc., Report: "City of Baltimore, Project LDH111495", December 16, 1991.

⁶⁶ U.S. Environmental Protection Agency (2003). Libby Asbestos Site Residential/Commercial Cleanup Action Level and Clearance Criteria Technical Memorandum", Draft Final Report, December 15, 2003, available at: <http://www.epa.gov/region8/superfund/libby/CleanupCriteria121503.pdf>.

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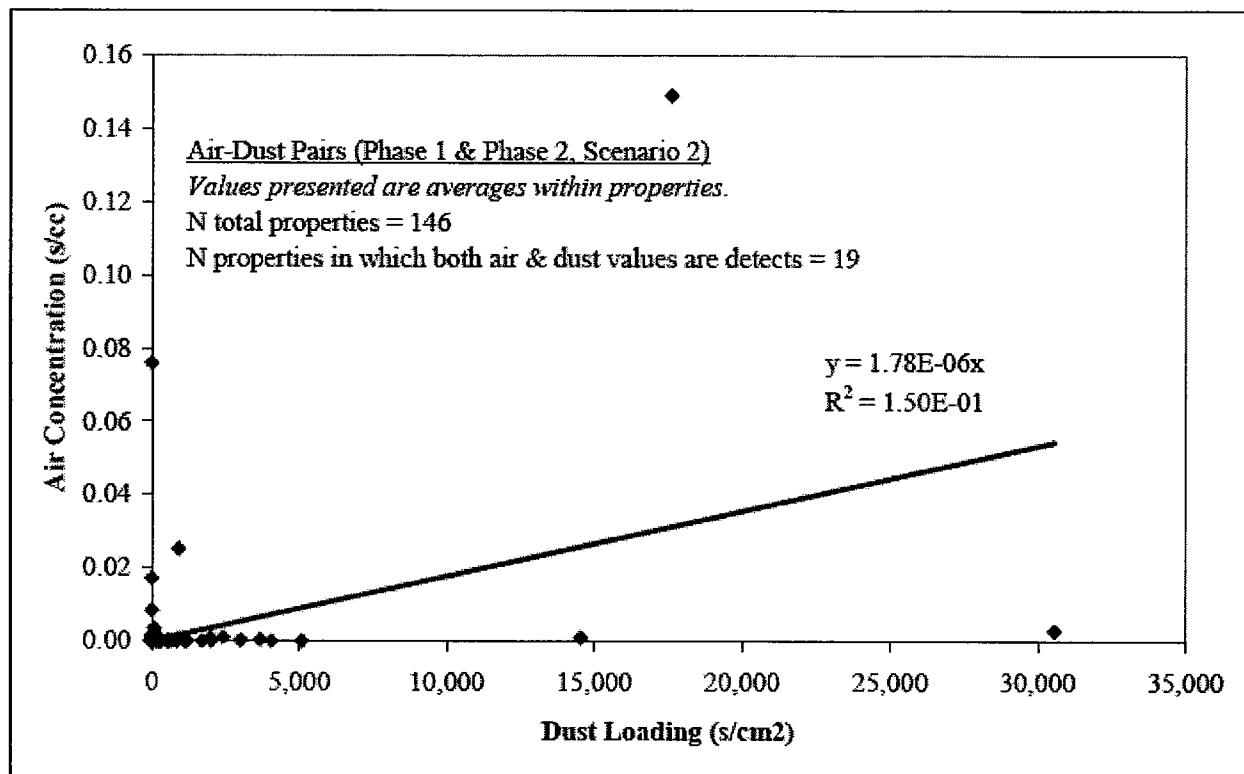


Figure 1. Testing Performed by the EPA in Libby shows no correlation between airborne asbestos concentrations and asbestos in the surface dust. Each point corresponds to a measurement of asbestos concentration in surface dust and a corresponding measurement of airborne asbestos fiber concentration. If surface dust was a predictor of airborne levels, the points would tend to fall along a line, not along the axes of the graph.

9.1 Post Earthquake Residential Sampling – Northridge Earthquake

A large scale study found no relationship between surface asbestos concentration and airborne asbestos levels in 1998.⁶⁷ The study involved sampling and testing of air and surface dust collected from 142 homes in the Los Angeles area following the 1995 Northridge earthquake. Each of the homes involved in the study claimed structural damage resulting from the earthquake. This was the first published study to evaluate a large set of data where simultaneous measurements of airborne dust concentrations and surface dust were compared. It was also the first study to make the comparison in circumstances where damaged ACM was in the active living space, thus creating a potential for ongoing release of fibers and ACM particulate.

Over 1300 air samples were collected in the homes. Air samples were typically collected in several area locations throughout the home and outside the home and at two elevations

⁶⁷ R. J. Lee, D. R. Van Orden, and I. M. Stewart (1999). "Dust and Airborne Concentrations - Is There a Correlation?" Advances in Environmental Measurement Methods for Asbestos, ASTM publication STP 1342.

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- one roughly at the breathing height for adults (5 ft) and the other at the breathing height for small children (1.5 ft) since the potential exists that a significant gradient in airborne asbestos concentration could exist if surface dust was indeed being entrained. Air samples were analyzed using established PCM (NIOSH 7400⁶⁸) and TEM (NIOSH 7402⁶⁹) methods. Surface dust was collected from the various homes using adhesive lift sampling (2000 samples) and microvacuum sampling (900 samples) methods. PCM and SEM techniques were used to determine the asbestos content of the surface dust samples.

The study concluded that while interior airborne asbestos concentrations were higher than outdoor concentrations, they did not exceed levels reported as urban background nor were there significant differences between levels detected in the presence of damaged ACM and those detected in homes where no ACM was present. In addition, the presence of damaged ACM in occupied living space did not correlate with airborne asbestos in either adult or child breathing zones. Therefore, the combined effects of entrainment of surface dust and shedding from damaged ACM are negligible. The study also demonstrated that the presence and/or the amount of asbestos in surface dust, as measured by indirect sample preparation techniques, are not a predictor of airborne concentrations. Furthermore, the presence of asbestos in the surface dust was found to be independent of the presence of asbestos in bulk samples collected from the residences and the presence of airborne asbestos was found to be independent of the presence of asbestos in the corresponding surface dust.

Figure 2 shows data from air and dust samples that were collected in homes that were reportedly damaged during the Northridge earthquake. As with the Libby comparison in Figure 1, these data show no correlation between surface dust and airborne asbestos fibers.

⁶⁸ National Institute for Occupational Safety and Health (NIOSH), "Updates on NIOSH Method 7400." NIOSH Manual of Analytical Methods, May 1989.

⁶⁹ National Institute for Occupational Safety and Health (NIOSH), "Asbestos Fibers - Method 7402." NIOSH Manual of Analytical Methods, May 1989.

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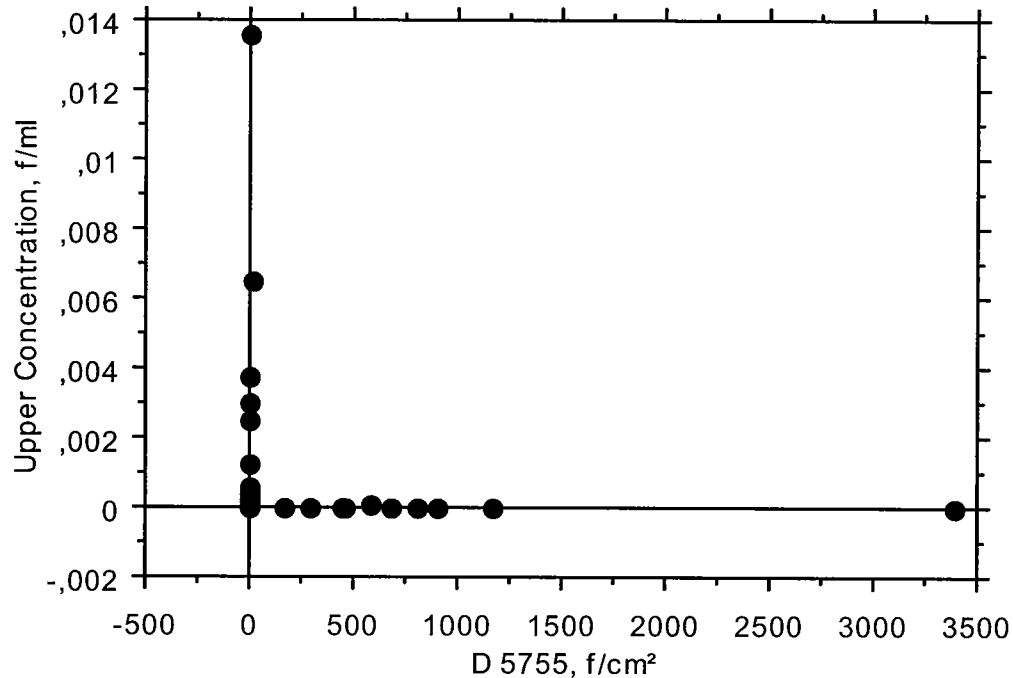


Figure 2. Testing performed following the Northridge earthquake shows no correlation between airborne asbestos concentrations and asbestos in the surface dust. As in the graph of Libby samples (Figure 1), had the surface dust levels been a predictor of airborne levels, the points would not have clustered along the axes of the graph.

10.0 The extensive body of exposure data demonstrates that the cumulative exposures to building occupants and maintenance workers are well below the lifetime exposures permitted by OSHA

Each airborne asbestos concentration reported in the prior sections can be interpreted relative to the OSHA permissible exposure limit (0.1 f/cc, 8-hour TWA). The OSHA PEL is a regulatory standard that assumes an exposure lasting for a 45 year working lifetime, 50 weeks a year, 40 hours per week. Thus, the OSHA PEL takes into account not only the concentration of airborne asbestos but also the frequency and duration of asbestos exposures over a person's lifetime.

Table 5 summarizes the extensive body of exposure data presented in the prior sections and compares these results with the OSHA PEL.

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Table 5. Summary of Reported Airborne Fibers Levels

Report Section	Study	# Samples	# Bldgs	Type	PCM, f/cc	TEM, f/cc
	OSHA PEL				0.1	
5.1	Chatfield			Ambient		0.013 (max)
5.2	GSA		67	Area		0.00007
5.3	UK Bldgs		43	Area		< 0.001
5.4	71 Schools	473	71	Area		0.00023
5.5	HEI-AR	1377	198	Area		0.00019 – 0.00051
5.6	315 Bldgs	2892	315	Area		0.00013
5.7	752 Bldgs	6566	752	Area		0.00012
6.1	Maint Work	1227		Personal	0.002	
6.3	HEI-AR			Personal		0.0109
6.4	Mo Custodians	138		Personal		0.0001
6.5	Corn	500	5	Personal	< 0.085	
6.6	Hospital O&M	394	1	Personal	< 0.1	
6.7	DC Office	916	1		0.0059	
6.8	Mlynarek	1008		Personal Area	< 0.027 0.0090	
6.9	Various Bldg	7519 1375		Area Personal	0.0086 0.020	
6.10.1	Cable Pull			Personal	0.04 0.11	
6.10.2	Gym			Personal	< 0.01 0.02	
8.1	Loma Prieta	419	55	Area		0.0001

Given that maintenance and custodial work is generally periodic, most of these exposures will be intermittent and not continuous. As the data in Table 5 demonstrates, the PCM and TEM measurements are generally well below the OSHA PEL, even though they are not expressed as TWAs. The PCM concentrations for personal exposures would be even lower if appropriate TWA calculations were made. In any event, the extensive body of exposure data demonstrates that the cumulative exposures to building occupants and maintenance workers are generally well below the lifetime exposures permitted by OSHA.

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Education:

Ph.D., Theoretical Solid State Physics, 1970, Colorado State University
B.S., Physics, 1966, University of N. Dakota

Career/Employment:

- RJ Lee Group, Inc., President, 1986 - Present
- U. S. Steel Technical Center, Head - Physics, Electron Microscopy and Surface Analysis Section, 1973 - 1985
- Purdue University, Associate Professor, 1971
- Purdue University, Assistant Professor, 1970
- Lake Region Junior College, Instructor, 1966

Summary:

- Pioneered the use of quantitative electron diffraction techniques for the identification of asbestos
- Development of automated techniques for combined x-ray microanalysis and electron microscopy
- Developed and manufactured first PC-based Scanning Electron Microscope
- Developed Forensic product for GSR
- Developed Forensic LIMS software

Honors, Awards, Fellowships & Memberships:

- Microbeam Analysis Society
- ASM International
- ASTM Committee
- American Concrete Institute
- American Ceramic Society
- National Stone, Sand and Gravel Association
- International Standards Organization
- Health Effects Institute - Asbestos Research Literature Review Panel
- EPA Scientific Review Panel on Air Chemistry and Physics (1989)
- EPA Select Panel for Development of Methodology for Asbestos Analysis by Transmission Electron Microscopy (1987)
- Advisor on Asbestos Analysis to the Environmental Protection Agency
- External Advisory Committee for the College of Natural Sciences, Colorado State University
- National Defense Education Act Fellowship - 4 years
- Innovator of the Year – North Dakota, 1998
- Honorary Doctor of Science – University of North Dakota, 1996
- Entrepreneur of the Year – Mid-Atlantic States, 1991

Publications & Presentations: 189

Patents: 6

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Deposition and Trial Testimony of Richard Lee

<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Tamiko Jones, et al. v. NL Industries, Inc, et al.	US District Court, Northern District of Mississippi	4:03cv229MB	12/21/2005	Deposition	Lead in paint
Banks, et al. v. The Sherwin-Williams Company, et al	Circuit Court of Bolivar County,	Civil Action No. 2001-25	10/11/2005	Deposition	paint
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		4/14/2005	Deposition	Insurance
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		3/28/2005	Hearing	Insurance
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		3/17/2005	Hearing	Insurance
Charles A. Winkler vs. ACandS, Inc., f/k/a Armstrong Contracting & Supply Company	Circuit Court for Baltimore City	CT-1 Trade Cases, Case No. 24-X-02-001293	3/3/2005	Deposition Telephone	Asbestos

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<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Star Scientific vs. R.J. Reynolds Tobacco Company	United States District Court for the District of Maryland/Northern Division	Civil Case No. MJG 01-1504	2/7/2005	Trial	Patent infringement
Joseph F.Svec, Jr., et al vs. ACandS, Inc., et al	Circuit Court for Baltimore City	Consolidated Case No. 24x04000505	2/4/2005	Deposition Telephone	Asbestos
Herman J. St. Pe vs. The McCarty Corporation, et al (Entergy)	Civil District Court for the Parish of Orleans, State of Louisiana	No. 2003-4844	1/14/2005	Deposition	Asbestos
Star Scientific vs. R.J. Reynolds Tobacco Company	United States District Court for the District of Maryland/Northern Division	Civil Case No. MJG 01-1504	12/30/2004	Hearing	Patent infringement
Donald and Judy Perman vs. Atlas Turner, Inc., et al.	In the Superior Court of the State of California in and for the County of San Francisco	No. 428104	11/19/2004	Deposition Telephone	Asbestos
Bre'Annah Banks, et al., vs. Sylvester Vickers, et al.	Circuit Court of Bolivar County, Mississippi, First Judicial District	Civil Action No. 2001-25	11/11/2004	Deposition	paint

Deposition and Trial Testimony of Richard Lee

<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		11/10/2004	Hearing	Insurance
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		11/9/2004	Hearing	Insurance
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		11/8/2004	Hearing	Insurance
Taunus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		10/19/2004	Deposition	Insurance
Alvarez, Duckworth, Gehler, Labarbera, Young vs. 3M Company, et al	Supreme Court of the State of New York, County of New York	Index Nos.: 02-121314, 02-125250, 02-122140, 02-124920, 02-125245	10/13/2004	Deposition	asbestos/brakes
Carlton Rand, et al., vs. Ametek, Inc., et al	The District Court Brazoria County, Texas, 239th Judicial District	Cause No. 24545-PS03	10/6/2004	Deposition	Asbestos

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<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Taurus Corporation vs. Allianz Insurance Company, AXA Corporate Solutions Insurance Company, and AXA Global Risks US Insurance Company	Appraisal		9/10/2004	Deposition	Insurance
ADBEL, Ltd., et al, vs. KBS, Inc., et al	Virginia: In the Circuit Court of the County of Chesterfield	Case No. CL02-296	8/19/2004	Deposition	Structural Fill
Lawrence Addison, et al (affecting cases Robert G. Delauter, Stephanie Davis) v. ACandS, Inc., et al	Circuit Court for Baltimore City	Consolidated Case No. 24-X-03-000359 Deluater 24-X-03-000784; Davis 24-X-03-000113	7/7/2004	Deposition	Asbestos
Laura Paz, Individually and as Special Administrator of the Estate of Farhad Dehghan, Deceased vs. A.W. Chesterton, Inc., et al.	In the Circuit Court Third Judicial District Madison County, IL	03-L-663	2/23/2004	Deposition Telephone	Asbestos PI -- Product ID
Bakelite / West Virginia (et al Canfield, Hornsby, Surphin, Starcher, Sayre)	Circuit Court of Kanawha County, West Virginia	03-C-9600	8/28/2003	Deposition	Asbestos PI -- Product ID
Chesterfield Crossing Shopping Center Kohl's Department Stores, Inc., v. Target Stores, Inc.	United States District Court for the Eastern District of Virginia, Richmond Division	Consolidated Civil Action No.: 3:02CV633	6/27/2003	Deposition	Structural Fill

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<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Zonolite Attic Insulation	United States Bankruptcy Court for the District of Delaware	01-01139 (JFK)	6/6/2003	Deposition	Asbestos
Raleigh Landry, et al. v. Avondale Industries, Inc., et al. (in conjunction with Barbara Catania, et al. v. Amchem, Inc., et al)	United States District Court, Middle District of Louisiana	02-5103	5/2/2003	Deposition	Asbestos
Barbara Catania, et al. v. Amchem, Inc., et al (in conjunction with Raleigh Landry, et al. v. Avondale Industries, Inc., et al.)	United States District Court, Middle District of Louisiana	02-5103	5/2/2003	Deposition	Asbestos
Star Scientific vs. R.J. Reynolds Tobacco Company	United States District Court for the District of Maryland	AW-01 CV1504	3/17/2003	Deposition	Patent infringement
Illinois, State of, v Conwred Corporation	Circuit Court for the Seventh Judicial Circuit Sangamon County, Illinois	98-L-0061	2/7/2003	Deposition	Asbestos - Ceiling tile
State of Illinois v. US Gypsum, et. al.	Circuit Court for the Seventh Judicial Circuit Sangamon County, Illinois	98-L-0061	2/7/2003	Deposition	Asbestos - Ceiling tile

Deposition and Trial Testimony of Richard Lee

<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Robert Lee Bickham, et al vs. Metropolitan Life Insurance Company, et al (O'Neal Chambers, Jr., et al., vs. National Service Industries, Inc., et al.)	Circuit Court of Claiborne County, Mississippi	No. 70,760 c/w 72,154 and 72,986 Division "E"	1/20/2003	Deposition	Asbestos
Amchem Products (Newport News) ALL ASBESTOS CASES)	Circuit Court of the City of Newport News	CL99-2000-00	11/22/2002	Trial	Asbestos
United States of America vs. W.R. Grace & Company, W.R. Grace & Co. - Conn., and Kootenai Development Corporation	United States District Court for the District of Montana Missoula Division	Civ. No. 01-72-M-DWM	9/28/2002	Deposition	Asbestos
TA Instruments V. Perkin Elmer	United States District Court for the District of Delaware	95-545-SLR	9/27/2002	Trial	Patent infringement
Amchem Products, All Asbestos cases	Circuit Court of Kanawha County, WV	02-C-9004	9/19/2002	Deposition Telephone	Asbestos
Arroyo Vista (aka Arroyo Oaks) aka Hendry, et al. v Fieldstone Company, et al.	Superior Court of the State of California County of Orange, Central Justice Center Annex	798881	8/2/2002	Deposition	Concrete failure

Deposition and Trial Testimony of Richard Lee

<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Arroyo Vista (aka Arroyo Oaks) aka Hendry, et al. v Fieldstone Company, et al.	Superior Court of the State of California County of Orange, Central Justice Center Annex	798881	8/1/2002	Deposition	Concrete failure
MSHA Proposed Ruling 2002	Mine Safety and Health Administration Asbestos Hearing Panel		6/20/2002	Hearing	Asbestos
Douglas McCarthy and Diana Wheeler McCarthy v. ACands, et al	Superior Court of the State of California for the County of Los Angeles	BC252223	6/12/2002	Deposition Telephone	Asbestos PI -- Paper Mill Felt
Robert Lee Bickham et al v. Metropolitan Life Insurance Co., et al	22nd Judicial District Court Parish of Washington State of Louisiana	Case No. 70,760 c/w 72,154 and 72,986 Division "E"	1/24/2002	Deposition	Asbestos PI -- Paper Mill Felt
Delaware Trust Didimoi Property Holdings, N.V., and General Electric Capital Corporation, v. Cigna Insurance Company	United States District Court for the district of Delaware	99-605 Civil Action 00-186-JJF	11/28/2001	Hearing	Asbestos buildings
Delaware Trust Didimoi Property Holdings, N.V., and General Electric Capital Corporation, v. Cigna Insurance Company	United States District Court for the district of Delaware	99-605 Civil Action 00-186-JJF	11/27/2001	Hearing	Asbestos buildings

Deposition and Trial Testimony of Richard Lee

<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Delaware Trust Didimoi Property Holdings, N.V., and General Electric Capital Corporation, v. Cigna Insurance Company	United States District Court for the district of Delaware	99-605 Civil Action 00-186-JJF	11/13/2001	Hearing	Asbestos buildings
Delaware Trust Didimoi Property Holdings, N.V., and General Electric Capital Corporation, v. Cigna Insurance Company	United States District Court for the district of Delaware	99-605 Civil Action 00-186-JJF	11/12/2001	Hearing	Asbestos buildings
Mesa Vista South	Orange County Superior Court	Case No.: 802639	10/29/2001	Trial	Concrete failure
Delaware Trust Didimoi Property Holdings, N.V., and General Electric Capital Corporation, v. Cigna Insurance Company	United States District Court for the district of Delaware	99-605 Civil Action 00-186-JJF	10/23/2001	Hearing	Asbestos buildings
Crown Ridge Development	Superior Court of the State of California County of Riverside	RIC 322638	10/15/2001	Deposition	Concrete failure
Michigan Felt Testing	22nd Judicial District Court No. 70,760, c/w 72,154, c/w 72,986	RB-BIC-1585	9/28/2001	Video Deposition	Asbestos PI -- Product ID

Deposition and Trial Testimony of Richard Lee

<u>Case Name</u>	<u>Court</u>	<u>Case Number</u>	<u>Testimony Date</u>	<u>Testimony</u>	<u>Case type</u>
Novo, Gabriel v AcandS	In the Circuit Court of Baltimore City	Case No.: 24X000000003	9/17/2001	Deposition	Asbestos - Personal Injury, brakes
Mesa Vista South	Orange County Superior Court	Case No.: 802639	8/22/2001	Deposition	Concrete failure
Prem v. Shea Homes (Melange)	Superior Court of the State of California for the County of San Diego	731815	8/3/2001	Deposition	Concrete failure
Prem v. Shea Homes (Melange)	Superior Court of the State of California for the County of San Diego	731815	8/2/2001	Deposition	Concrete failure
Labdon et al v Fieldstone et al	Superior Court of the State of California Orange County, Central Justice Center	No. 764896	6/21/2001	Deposition	Concrete failure
Lois Ricard, Individually and as Special Administrator of the Estate of Victor Ricard, Deceased vs. Bondex International, Inc. et al (Mason City) Rickard v. United States Gypsum Company, Madison, County, IL	Circuit Court Third Judicial Circuit Madison, County, IL	99-L-1106	6/1/2001	Deposition Telephone	Wallboard/joint compound